

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

Paper No. 55

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KENICHI SATO,
HIDEHITO MUKAI
and NOBUHIRO SHIBUTA

Appeal No. 1999-1462
Application 08/747,881

HEARD: MAY 4, 2000

Before JERRY SMITH, RUGGIERO and LALL, Administrative Patent Judges.

LALL, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from
the Examiner's final rejection¹ of claims 1 to 3 and 5 to 7.

¹This is an appeal from the last final rejection (paper no. 38). An amendment after the final rejection was filed as paper no. 40 canceling claim 19, and was approved for entry

The invention is related to a superconducting wire which comprises a metal sheath having a thickness-directional dimension and a plurality of superconductors independently distributed in the metal sheath in the thickness direction. The thickness-directional dimension of each of the superconductors is not more than 5% of the thickness-directional outside dimension of the metal sheath. The superconductors are bismuth oxide superconductors having components of Bi-Sr-Ca-Cu-O or (Bi, Pb)-Sr-Ca-Cu-O. The invention includes an organic material provided to cover the metal sheath. The invention is further illustrated by the following claim.

1. A superconducting wire comprising:

a metal sheath having a thickness-directional dimension;
and

a plurality of superconductors independently distributed in said metal sheath in said thickness direction, wherein the thickness-directional dimension of each said superconductor is not more than 5% of the thickness directional outside dimension of said metal sheath and wherein said superconductors are bismuth oxide superconductors having components of Bi-Sr-Ca-Cu-O or

for this appeal (paper no. 41).

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(Bi, Pb)-Sr-Ca-Cu-O.

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The Prior Art applied:

U.S. Patent

Schwartzkopf	5,053,384	Oct. 1, 1991
		(Filed Mar. 12,
1990)		

European Patent Application

Hagino et al. (Hagino)	0357779	Mar. 14, 1990
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Patent Abstracts of Japan

Ochiai	1-7414	Jan. 11, 1989
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Claims 1 to 3 and 5 to 7 stand rejected under 35 U.S.C.
§ 103 over Hagino, Ochiai and Schwartzkopf.

Rather than repeat the arguments of Appellants and the Examiner, we make reference to the briefs² and the answer for the respective details thereof.

OPINION

We have considered the rejections advanced by the Examiner and the supporting arguments. We have, likewise, reviewed the Appellants' arguments set forth in the briefs.

It is our view that the rejection under 35 U.S.C.

²A reply brief was filed as paper no. 46 and was considered without any further response by the Examiner (paper no. 47).

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§ 103 over Hagino, Ochiai and Schwartzkopf is affirmed with respect to claims 1 to 3 and 6 to 7, but is reversed with respect to 5. Accordingly, we affirm-in-part.

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed combination or other modification. See In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Furthermore, the conclusion that the claimed subject matter is prima facie obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Rejections based on § 103 must rest on a factual basis with these facts being

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interpreted without hindsight reconstruction of the invention from the prior art. The Examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968). Our reviewing court has repeatedly cautioned against employing hindsight by using the Appellants' disclosure as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art. See, e.g., Grain Processing Corp. v. American Maize-Products Co., 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988). On the other hand, we are also guided by the precedence of our reviewing court that the limitations from the disclosure are not to be imported into the claims. In re Lundberg, 244 F.2d 543, 548, 113 USPQ 530, 534 (CCPA 1957); In re Queener, 796 F.2d 461, 464, 230 USPQ 438, 440 (Fed. Cir. 1986).

With this as background, we analyze the prior art applied by the Examiner in the rejection of the claims on appeal.

Analysis

All the claims on appeal, 1 to 3 and 5 to 7 are rejected over Hagino, Ochiai and Schwartzkopf. We now consider the three Appellants-elected groups (brief, page 3) of claims below.

Claims 1 to 3 and 6

We take claim 1 as representative of this group. Appellants argue (brief, pages 4 to 8 and reply brief, page 2) that Hagino does not show the claimed limitation of "wherein the thickness-directional dimension of each said superconductor is not more than 5% of the thickness directional outside dimension of said metal sheath " The Examiner asserts (answer, pages 5 to 6) that Hagino does disclose this limitation. The Examiner incorporates (id. 5) a part of paper no. 28, a prior final rejection, showing the calculations which prove the claimed ratio to be less than 5%. Appellants have presented (brief, pages 5 to 7) a set of their own calculations in an attempt to show that Hagino does not disclose the claimed ratio. In our view, the Examiner's reasoning is sound and is based on Hagino's equation (page 11) for the "reduction ratio" and "[e]xample 2" (page 13). In

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example 2, clearly, when the two rollings are performed with a Hagino's disclosed reduction ratio of 60% at each pass, one gets a flat cable of outside thickness of 640 μm , wherein the thickness of each superconductor wire is reduced to 20 μm , thereby yielding a ratio of 3.125%, see figs. 5 to 8. This meets the claimed ratio of each superconductor wire to the outside thickness of the metal sheath. Therefore, we sustain the obviousness rejection of claim 1 and its grouped claims 2, 3 and 6 over Hagino, Ochiai and Schwartzkopf.

Claim 5

After evaluating the rejection of this claim, this claim the Examiner's related response (answer, pages 4 to 6) and Appellants' related arguments (brief, page 8), we agree with Appellants that the Examiner has not pointed to any place in Schwartzkopf or Ochiai where the claimed ratio for the bismuth oxide superconductors is shown or taught. We are of the view that the applied prior art does not teach the claimed ratio for such superconductors. Therefore, we do not sustain the obviousness rejection of claim 5 over Hagino, Ochiai and Schwartzkopf.

Claim 7

This claim additionally calls for "an organic material covering said metal sheath." We find that Ochiai teaches the desirability as well as the application of an organic type film (see abstract) over the outer surface of a superconductor to make the superconductor non-permeable to moisture. Therefore, we agree with the Examiner that it would have been obvious to an artisan at the time of the invention to coat the metal sheath of the superconductor cable of Hagino with an organic material as taught by Ochiai. Thus, we sustain the

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rejection of claim 7 over Hagino, Ochiai and Schwartzkopf.

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In summary, we have affirmed the Examiner's decision of rejecting under 35 U.S.C. § 103 claims 1 to 3 and 6 to 7, but reversed with respect to claim 5.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

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JERRY SMITH)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOSEPH F. RUGGIERO)	
Administrative Patent Judge)	APPEALS AND
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)	INTERFERENCES
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PARSHOTAM S. LALL)	
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PSL:hh

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